

REMARKS

Applicant has carefully considered the final office action and submits the following response.

Drawing

The examiner continues to object to the drawings as not showing every feature of the invention specified in the claims, as allegedly required under 37 C.F.R. 1.83(a). The objection should be withdrawn for the following reasons.

All of the pending claims are **process claims-- not apparatus claims**. "It has been USPTO practice to treat an application that contains at least one process or method claim as an application for which a **drawing is not necessary for an understanding of the invention** under 35 U.S.C. 113 (first sentence)." MPEP 601.01(f) (emphasis added). Under MPEP 601.01(f) (emphasis added):

A nonprovisional application having at least one claim, or a provisional application having at least some disclosure, directed to the subject matter discussed above for which a drawing is usually not considered essential for a filing date, not describing drawing figures in the specification, and filed without drawings **will simply be processed ****, so long as the application contains something that can be construed as a written description.

The present application has at least some disclosure directed to subject matter for which a drawing is usually not considered essential for a filing date, and does not describe drawing figures. The examiner has not established that the application does not contain "something that can be construed as a written description." *Id.*

The examiner nevertheless continues to object to the drawings under 37 C.F.R. 1.83(a), which reads (emphasis added):

(a) The drawing in a nonprovisional application must show every feature of the invention specified in the claims. **However, conventional features disclosed in the description and claims, where their detailed illustration is not essential for a proper understanding of the invention, should be illustrated in the drawing in the form of a graphical drawing symbol or a labeled representation (e.g., a**

labeled rectangular box). In addition, tables and sequence listings that are included in the specification are, except for applications filed under 35 U.S.C. 371, not permitted to be included in the drawings.

New Figures 1 and 2, submitted with the response to office action filed May 11, 2007, are believed to comply with 37 C.F.R. 1.83(a).

Applicant respectfully requests that the examiner withdraw the objection.

Rejection Under 35 U.S.C. § 103

The examiner rejects claims 1, 2 and 4-28 as obvious over U.S. Patent No. 4,054,407 to Carruba, et al. ("Carruba") in view of Suppes et al (Compression-Ignition Fuel Properties of Fischer-Tropsch Syncrude, Ind. Eng. Chem. Res. 1998, 37 2029-2038), US004764266 (Chen et al), US03810732 (Koch), U.S. Patent No. 3,620,657 to Robinson, and DE19860308 to Koehne, et al. ("Koehne").

Response

The U.S. Court of Appeals for the Federal Circuit (the "Federal Circuit") recently affirmed that, on the issue of obviousness, **"a flexible TSM test remains the primary guarantor against a non-statutory hindsight analysis."** *Ortho-McNeil Pharmaceutical, Inc. v. Mylan Laboratories, Inc.*, 86 U.S.P.Q.2d 1196, 1201-02 (Fed. Cir. 2008), citing *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). The examiner has not met the flexible TSM test, and has not established that the claims are directed merely to **"the predictable use of prior art elements according to their established functions."** *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. ___, 127 S.Ct. 1727, 82 U.S.P.Q.2d 1385, 1396 (U.S. 2007) (emphasis added).

The examiner also has not established an **apparent reason to combine known elements** in the fashion claimed. *Id.* (emphasis added). The examiner admits that Carruba does not teach or suggest using a liquid Fischer-Tropsch derived hydrocarbon fuel in Carruba's burner. Office action, p. 10. The examiner also has not established an apparent reason to combine Carruba with Suppes and/or Chen in the fashion claimed.

-The examiner has not established an apparent reason to combine Carruba with Suppes and/or Chen in the fashion claimed

Suppes is directed to the evaluation of "cetane number, viscosity, cloud-point, and pour-point properties of syncrude and blends of syncrude with blend stocks such as ethanol and diethyl ether." Suppes, abstract at 2029 (emphasis added). According to Suppes, "blends comprised primarily of syncrude are potentially good CI [Compression-Ignition] fuels, with pour-point temperature depression being the largest development obstacle." *Id.* (emphasis added). Suppes states that "fuels based on >70% Fischer-Tropsch syncrude ... would fill an important niche in the EPACT [U.S. Environmental Policy Act] fuel menu, namely, an affordable liquid fuel that can be used in conventional diesel engines" that "generally have high cetane numbers (>65) and near-zero aromatic contents," Suppes (column 2, second full paragraph at page 2031, emphasis added).

The examiner has not established that operation of a compression ignition engine involves obtaining a droplet mixture comprising droplets of liquid Fischer-Tropsch derived hydrocarbon fuel and "subjecting the droplet mixture to a cool flame under evaporation conditions effective to produce an evaporated gaseous mixture comprising oxygen and hydrocarbons, the cool flame having a temperature of between 300 °C. and 480 °C when the pressure is 1 bar." Claim 1. The examiner therefore has not established that Suppes provides an apparent reason to modify Carruba in the fashion claimed.

Chen merely describes "[a]n integrated refining scheme for hydroprocessing high boiling fractions." Chen, abstract (emphasis added). The examiner has not established that Chen provides an apparent reason to modify Carruba in the fashion claimed.

As explained in the specification, using the claimed droplet mixture produces superior results. Compared to combusting Industrial Gas Oil, combusting the droplets comprising Fischer Tropsch derived hydrocarbon fuel produces better combustion, improved flame ignition, and less fouling of downstream heat exchanger surfaces. US 2005/024474, ¶ [0012].

-The examiner has not established an apparent reason to combine the references related to burners in the fashion claimed

The remaining cited references relate to various types of burners reflected in certain claims. The examiner has not established an apparent reason to combust the claimed droplet mixture comprising droplets of liquid Fischer-Tropsch derived hydrocarbon fuel in such burners for all of the reasons given above.


The examiner certainly has not established that, compared to combusting Industrial Gas Oil, combusting the droplets comprising Fischer Tropsch derived hydrocarbon fuel produces better combustion, improved flame ignition, and less fouling of downstream heat exchanger surfaces. US 2005/024474, ¶ [0012].

Applicant respectfully requests that the examiner withdraw the rejection and allow all of the pending claims.

CONCLUSION

Applicant respectfully requests consideration of the foregoing remarks and reconsideration and allowance of all of the pending claims. The Commissioner is hereby authorized to charge any fee in connection with this paper to Deposit Account No. 19-1800 (File no. T8576), maintained by Shell Oil Company.

Respectfully submitted,


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